WE CLAIM:

1. A method of providing dynamic Quality of Service (QoS) treatment of data traffic within a secure Virtual Private Network (VPN) tunnel, the method comprising the steps of:

   a) querying a policy database to obtain QoS information concerning a desired QoS treatment for data traffic within the VPN tunnel;

   b) forwarding the QoS information through the VPN tunnel to a VPN gateway at an opposite end of the VPN Tunnel; and

   c) attaching a QoS marker based on the QoS information to the data traffic within the VPN tunnel.

2. A method as claimed in claim 1, wherein the QoS information obtained from the policy database comprises the QoS marker.

3. A method as claimed in claim 1, wherein the QoS information obtained from the policy database comprises Tspec and Rspec parameters indicative of the desired QoS treatment.

4. A method as claimed in claim 3, wherein the step of attaching a QoS marker comprises the steps of:

   a) mapping the Tspec and Rspec parameters to the QoS marker; and

   b) inserting the QoS marker into a predetermined field of a header portion of the data traffic within the VPN tunnel.

5. A method as claimed in claim 4, wherein the QoS marker is a Differentiated Services Code Point (DSCP) value.

6. A method as claimed in claim 1, wherein the step of obtaining an indication of a QoS treatment further comprises the steps of:

a) obtaining, from a customer, an indication of a desired QoS treatment;

b) confirming an availability of the desired QoS treatment; and

c) if the desired QoS treatment is available, updating the policy database with information respecting the desired QoS treatment.

7. A method as claimed in claim 6, wherein the step of confirming an availability of the desired QoS treatment comprises any one or more of the steps of:

a) determining whether or not the VPN tunnel has sufficient available bandwidth to support the desired QoS; and

b) comparing the desired QoS to a Service Level Agreement (SLA).

8. A method as claimed in claim 1, wherein the step of querying the policy database is performed at a start of the communications session.

9. A method as claimed in claim 8, wherein the step of querying the policy database is performed in response to a session initiation message received from the customer.

10. A method as claimed in claim 1, wherein the step of querying the policy database is performed during the communications session.

11. A method as claimed in claim 10, wherein the step of querying the policy database is performed at predetermined intervals during the communications session.

12. A method as claimed in claim 10, wherein the step of querying the policy database is performed in response to a query request from either one of the customer and a service provider.

13. A method as claimed in claim 10, wherein the step of querying the policy database is performed in response to a change in the information respecting QoS treatment stored in the policy database.

14. A method as claimed in claim 1, further comprising a step of notifying a service provider of the indicated QoS treatment.

15. A method as claimed in claim 14, wherein the step of notifying the service provider is performed at a start of the communications session.

16. A method as claimed in claim 14, wherein the step of notifying the service provider is performed in response to a change in the indicated QoS treatment.

17. A VPN gateway adapted to provide dynamic QoS treatment of data traffic within a secure VPN tunnel, the gateway comprising:

a) means for querying a policy database to obtain QoS information concerning a desired QoS treatment for data traffic within the VPN tunnel;

b) means for forwarding the QoS information through the VPN tunnel to a VPN gateway at an opposite end of the VPN Tunnel; and

c) means for attaching a QoS marker based on the QoS information to the data traffic within the VPN tunnel.

18. A VPN gateway as claimed in claim 17, wherein the QoS information obtained from the policy database comprises the QoS marker.

19. A VPN gateway as claimed in claim 17, wherein the QoS information obtained from the policy database comprises Tspec and Rspec parameters indicative of the desired QoS treatment.

20. A VPN gateway as claimed in claim 19, wherein the means for attaching a QoS marker comprises:

a) means for mapping the Tspec and Rspec parameters to the QoS marker; and

b) means for inserting the QoS marker into a predetermined field of a header portion of the data traffic within the VPN tunnel.

21. A VPN gateway as claimed in claim 20, wherein the QoS marker is a Differentiated Services Code Point (DSCP) value.

22. A VPN gateway as claimed in claim 17, further comprising means for receiving a QoS request message indicative of the desired QoS treatment.

23. A VPN gateway as claimed in claim 17, wherein the means for forwarding the QoS information through the VPN tunnel comprises:

a) a policy update message adapted to convey the QoS information through the VPN tunnel; and

b) means for inserting the QoS information into a payload portion of the policy update message.

24. A VPN gateway as claimed in claim 23, wherein the policy update message is an ISAKMP/IKE message having a predetermined unique "Next Payload" type.

25. A VPN gateway as claimed in claim 17, wherein the policy database is queried at a start of the communications session.

26. A VPN gateway as claimed in claim 25, wherein the means for querying the policy database is responsive to a session initiation message received from the customer.

27. A VPN gateway as claimed in claim 17, wherein the policy database is queried during the communications session.

28. A VPN gateway as claimed in claim 27, wherein the policy database is queried at predetermined intervals during the communications session.

29. A VPN gateway as claimed in claim 27, wherein the means for querying the policy database is responsive to a query request from either one of the customer and a service provider.

30. A VPN gateway as claimed in claim 27, wherein the means for querying the policy database is responsive to a change in the information respecting QoS treatment stored in the policy database.

31. A VPN gateway as claimed in claim 17, further comprising means for notifying a service provider of the indicated QoS treatment.

32. A VPN gateway as claimed in claim 31, wherein the means for notifying the service provider is adapted to send a notification message to the service provider at a start of the communications session.

33. A VPN gateway as claimed in claim 31, wherein the means for notifying the service provider is adapted to send a notification message to the service provider in response to a change in the indicated QoS treatment.